

# Relationship Of Implementation Of Anxiety Management And Pain Management On Patient Satisfaction In Extraction Treatment By Clinical Dental Students At Unsoed Dental Education Hospital

Marsaa Paramita<sup>1\*</sup>, Adi Indrayanto<sup>2</sup>, Budi Aji<sup>3</sup>

<sup>1</sup> Faculty of Economics and Business, Jenderal Soedirman University

<sup>2</sup> Faculty of Economics and Business, Jenderal Soedirman University

<sup>3</sup> Faculty of Health Sciences, Jenderal Soedirman University

**Abstract.** The Basic Health Research Data showed that the Indonesian population with dental and oral problems was 25.9% and only around 31.1% received dental and oral care while 68.9% don't received dental and oral care. The Australian Research Center for Population Oral Health states that people avoid visiting dentists have a higher level of anxiety due to pain, shame, not knowing what to do with him, injections and costs of dental care. Anxiety in dental procedures is ranked fourth among the types of common fears. Dental procedures always show conditions that are stressful for the patient. Increased excessive anxiety worsens pain and even increases the perception of pain without being a stimulus with pain. Communication, patience and empathy are needed in dealing with anxiety and pain control. This will build maximum care and increase patient satisfaction in receiving care. Patient satisfaction is an important aspect in evaluating the quality of services and is needed in the process of improving services in health institutions. The measure of patient satisfaction in receiving dental care can provide useful information in understanding and predicting patient behavior for the provision of dental services. There is a journal about the attitude of self-reporting by dental clinic students related to anxiety management and pain management performed. However, it has not been assessed from the point of view of patient satisfaction, therefore this study aims to analyze the relationship of anxiety management and pain management to patient satisfaction. **Methods:** This research's type is quantitative research with a survey method using a questionnaire. The subjects of the study were a male and female adult patient who would receive dental extraction treatment at UNSOED Dental Education Hospital by clinical dental students at the integration unit. A list of questions related to management of anxiety and pain is quoted through journals that show the dimensions of the doctor's behavior in dealing with anxiety and pain during dental treatment. The level of patient satisfaction was measured with Likert scale with dimensions of Very Dissatisfied (VD), Dissatisfied (D), Quite Satisfied (QS), Satisfied (S), Very Satisfied (VS).

**Keywords:** Anxiety Management, Pain Management, Patient Satisfaction, Quality of Service, Dental Clinic Student

## 1. INTRODUCTION

The 2013 Basic Health Research Data (RISKESDAS) showed that the population of Indonesia who had oral and oral problems was 25.9% and only around 31.1% received dental care treatment while 68.9% did not receive treatment. Oral and dental care consists of several types, one of which is tooth extraction. Tooth extraction is the process of extracting teeth and their roots from within the alveolar bone socket (Gosh, 2006). The extraction process which consists of anesthetic action and extraction of the tooth can produce pain and stimulate anxiety. Anxiety is one factor that has a big role in humans to be reluctant to get dental health services. Based on research by the Australian Research Center for Population Oral Health states that people who avoid visiting a dentist have a higher level of anxiety can be caused by pain, shame, not knowing what the dentist will do to him, injections and costs of treatment teeth (Armfield, 2012). Dental procedures always show conditions that are stressful for the patient. Anxiety in dental procedures is ranked fourth among the types of general fears and ranks ninth among types of intense fear (Razavian et al., 2018). Many studies show that dental anxiety is caused by multifactorial including bad experiences in the past, the tendency of patients to think negatively about care to be received, general patient perceptions of dental treatment and general anxiety of patients in their personality (Abrahamsson et al., 2002).

---

\* Corresponding author. Tel.: (+62)081327090763;  
E-mail address: marsaaparamita@gmail.com

Dental anxiety can cause avoidance behavior of dental care that supports poor dental conditions and can affect general health (Mehrstedt et al., 2004). An increase in excessive anxiety can exacerbate pain and even increase the negative perception, painless conditions to be a stimulus with pain (Guivarch et al., 2017). Management of handling anxiety and pain needs to be done before and during the extraction procedure. Communication, patience and empathy are needed in dealing with anxiety and pain control. This will result in maximum care and increase patient satisfaction in receiving care (Kani, 2014).

Patient satisfaction is an important aspect in evaluating service quality and is needed in the process of improving services in health institutions (Luo et al., 2018). Measures of patient satisfaction in receiving dental care can provide information that useful in understanding and predicting patient behavior for dental services (Davies & Ware, 1981). Therefore this study will analyze the relationship of anxiety management and pain management to patient satisfaction in dental extraction treatment. This research is used as information in improving the quality of care dental education hospital which focuses on care actions by clinical students, especially in the Integration unit.

## 2. MATERIALS AND METHODS

This research is a type of quantitative research with a survey method that collects data using questionnaires and analyzes quantitative data using a cross-sectional approach. The subject of this study was a male and female adult patient who would receive dental extraction treatment by clinical students at Unsoed Dental Student Hospital with a total sample of 30 samples. Data was presented with various questions regarding the implementation of anxiety management and pain management that measured patient satisfaction using the Likert scale based on the journal by Sembel et al. (2014) with dimensions of Very Dissatisfied (VD), Dissatisfied (D), Quite Satisfied (QS), Satisfied (S), Very Satisfied (VS).

### a. Dental Anxiety Management

A list of anxiety management questions is quoted in the journal by Corah (1988) which shows the dimensions of dental student behavior in handling anxiety during dental treatment (Table 1).

Table 1. List of statements for management of dental anxiety

No	Statement of dental student behavior
1	The doctor warns you when the procedure causes pain
2	The doctor tells you to calm down
3	The doctor explains the procedure before starting treatment
4	The doctor ensures that you feel numbness after giving anesthesia before extraction
5	Shows that the doctor understands what you feel
6	The doctor has been friendly
7	Doctor show quick technique but but it doesn't look rushed or agitated
8	Doctor has used easy word in explain the treatment
9	The doctor encourages you to ask about the situation of treatment
10	The doctor has noticed what you said when answering questions from the doctor
11	The doctor has assured you that the treatment is not harmful
12	The doctor asks if you feel any discomfort during the procedure
13	The doctor smiles at you

b. Dental Pain Management

The list of anxiety management questions is quoted in the journal by O'Shea (1991) which shows the dimensions of the doctor's behavior in handling pain during dental treatment that has been modified and adjusted in the journal by Guivarc'h (2017) (Table 2).

Table 2. List of statements for dental pain management

No	Statement of dental student behavior
1	The doctor explained the treatment procedure
2	The doctor asked about the pain that was felt
3	The doctor asks you whether injecting anesthesia is useful to reduce the pain you feel
4	The doctor asks you about the pain that is felt during treatment
5	The doctor explains the pain that will be felt after the treatment is done
6	The doctor gives and explains the medication to treat illness after treatment

c. Patient Satisfaction

Measurement of overall patient satisfaction with the actions of doctors in providing dental services (table 3).

Table 3. List of statements in measuring patient satisfaction

No	Statement of dental student behavior
1	The overall action of doctors in providing good and appropriate dental services

Data that has been collected, then processed using multiple regression analysis (Multivariate Regression) with software tools of Statistical Product and Service Solution (SPSS).

### 3. RESULT AND DISCUSSION

The questionnaire result of patients with dental extraction treatment by clinical students at Unsoed Dental Student Hospital will be analyzed statistically using multiple regression with SPSS tools. Classical assumption and statistical tests were analyze. Classic assumption test, the normality data test is using probability plot normality tests. The results show plot data following a diagonal line (data is normally distributed). The multicollinearity test shows that the tolerance value of both variables is 0.723 (tolerance > 0.100), while the VIF value for both variables is 1.383 (VIF < 10.00). In heteroscedasticity test shows the pattern that is not clear (there are no symptoms of heteroscedasticity) and the autocorrelation test shows the value of durbin-watson is 2,277 (the value of durbin-watson between the DU and value (4-DU)). In the statistical test, the T test shows a significant number of X1 variables (variable dental anxiety management) of 0.017 and a significant number of variables X2 (management of dental pain) of 0.030 (sig. < 0.05). The F test shows a significant number of 0.034 (sig. < 0.05) and the coefficient of determination shows the number 0.471.

### 4. DISCUSSIONS

In the multiple regression statistical test both the T test and the F test showed a significant number < 0.05 which that dental anxiety management and dental pain management have a significant relationship to patient satisfaction. Patient satisfaction with dental health services is a comparison between perceptions of service received with expectations before getting service. If perceptions are expected going well and accordingly, this illustrates the health services provided are good and will lead to high satisfaction (Sembel et al. 2014). Dental care is an complex action and requires a considerable amount of time such as pulling teeth so that it tends to cause anxiety and pain. Dental anxiety is in fifth place as the most feared situation. High prevalence often makes patients avoid visiting the dentist because of anxiety during treatment (Hamud et al., 2009).

Anxiety is a normal response that often occurs in everyone when facing something threatening and can affect a person's behavior. This is exacerbated if the person has experienced trauma before and can influence treatment in the future (Yahya et al., 2016).

There are several ways to manage patients with anxiety during dental care, namely pharmacology and non-pharmacology approaches (Kani, 2014). In non-pharmacological therapy, there is behavioral therapy that shows the ability of doctors to understand the character of each patient in differences in age, personality and previous experience. Patient identification is needed to overcome anxiety during treatment. Besides that there is cognitive therapy which is concentrated in the process of thinking by how to restructure thoughts about the situation during treatment. This therapy encourages patients to challenge to change the patient's mindset through understanding that the feared stimulation is harmless. A person's perception of stimulus is the etiology of fear and perception of danger to get treatment if the patient is also supported by painful trauma about dental treatment in the past (Kani, 2014). Besides the patient's anxiety problems, pain problems are also noticed.

The most common dental complaint is pain. There are more than 80% of all dental visits. Children / adolescents and the elderly are most vulnerable to pain. In children / adolescents caused by psychological factors of immature patients, while in the elderly caused by physiological conditions of the body (Effendy & Hanum, 2014). Pain during dental treatment tends to be associated with invasive procedures such as tooth extraction and dental surgery. Local anesthesia is a painful and anxious procedure. Some signs that need to be considered by doctors related to the pain experienced by patients include the patient's blood pressure increases, fast heart rate, and patient behavior such as gripping the bench firmly and trying to grab someone. Management of dental pain can be done by reducing several factors that cause pain, both peripherally and centrally. There are three classes of drugs used to inhibit the work of nociceptive afferent fibers, namely non-opioid analgesics (NSAIDs), opioid analgesics, and local anesthetics. Management of dental pain beside during anesthesia and analgesics can also be done by educating patients (Macri, 2016).

Management of dental anxiety and dental pain management is needed during the dental treatment process especially in invasive care. Those management pain and anxiety has a relationship with patient satisfaction. Variable patient satisfaction is an important task for health care providers. One effect of patient satisfaction or dissatisfaction will have an impact on the success of the health care business. Patient satisfaction as a health care user is one indicator of the quality of health care. Satisfaction is a measure of treatment outcomes based on the patient's view. High satisfaction has also been associated with a high measure of treatment compliance that has high compliance (Aldosari et al., 2017).

## REFERENCE

- Abrahamsson, KH. Berggren, U. Hallberg, L. Carlsson, SG. (2002). Dental Phobic Patient's View of Dental anxiety and Experiences in Dental Care: A Qualitative Study. *Scand Journal Caring*. 16, 188-196
- Aldosari, MA. Tavares, M. Matta-Machado, ATG. Abreu, MHNG. (2017). Factors Associated With Patient's Satisfaction in Brazilian Dental Primary Health Care. *PLOS ONE*. 12(11), 1-13
- Corah NL, O'Shea RM, Bissell GD et al. (1991) The dentist-patient relationship: perceived dentist behaviors that reduce patient anxiety and increase satisfaction. *J Am Dent Assoc* 1988 116, 73-76
- Davies, AL. Ware, JE. (1981). Measuring Patient Satisfaction with Dental Care. *Social Science & Medical*. 15A, 751-760

- Ghosh, P. K., (2006), Synopsis of Oral and Maxillofacial Surgery: An Update Overview, New Delhi: Jaypee Brothers
- Guivarc'h, M. Serre, BS. Jacquot, B. Le coz, P. Bukiet, F. (2017). Dental student's Attitudes Towards Management Of Pain and Anxiety During a Dental Emergency: Educational Issues. Scientific Research Report. P, 1-8
- Hamud R, Waish LJ. (2009). Dental anxiety: Causes, complications and management approaches. J Minim Interv Dent. 2(1), 67-78.
- Kani, E. (2014). Management of Dental Anxiety Clinical. Dental Health. 53(6), 32-33
- Luo, JYN. Liu, PP. Wong, MC. (2018). Patient's Satisfaction With Dental Care: A Qualitative Study to Develop A Satisfaction Instrument. BMC Oral Health. 2, 18-25
- Macri, D. (2016). Pain Management in Dentistry. The Dental Assistant Journal. P. 1-5
- Mehrstedt, M. Tonnies, S. Eisentraut, I. (2004). Dental Fears, Health Status and Quality of Life. Anesth Prog. 51, 90-94
- O'Shea RM, Mendola P, Corah NL. (1991) Dental students' treatment of anxious patients. Soc Sci Med. 32, 229-232
- Razavian, H. Sepah, SM. Zare, H. Sspahvandi, M. (2018). State and Trait Anxiety Evaluation in Dental Patient. International Journal Depress Anxiety. 1(1), 1-6
- Sembel, M. Opod, H. Hutagalung, BSP. (2014). Gambaran Tingkat Kepuasan Pasien Terhadap Perawatan Gigi dan Mulut Di Puskesmas Bahu. Jurnal e-Gigi. 2(2), 1-11
- Yahya, NB. Leman, MA., Hutagalung, BSP. (2016). Gambaran Kecemasan Pasien Ekstraksi Gigi Di Rumah Sakit Gigi & Mulut (RSGM) Unsrat, Jurnal Ilmiah Farmasi. 5(1), 39-45